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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/612,733

07/10/2000

John T. Kennedy

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7590

03/26/2004

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EXAMINER

JACKSON, CORNELIUS H

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/612,733

Applicant(s)

KENNEDY ET AL.

Examiner

Cornelius H. Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 40-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgment

1. Acknowledgment is made that applicant's Amendment, filed on 10 November 2003, has been entered. Upon entrance of the Amendment, claims 40-48 and 50 were amended and claim 52 was added. Claims 40-52 are now pending in the current application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 40-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hart et al. (6192061) in view of Opower (4939738). Regarding claim 40, Hart et al. teach a laser structure **Fig. 8** comprising: an elongated, dielectric waveguide structure **36** having a plurality of waveguide channels **37a-d** therein, said waveguide channels including a gaseous gain medium, **see col. 1, lines 5-67**; a pair of electrodes **38,32**; a metal housing **24** enclosing said waveguide structure **36** and said pair of electrodes **38,32** with said first electrode **38** being electrically isolated from said metal housing **24**. Hart et al fails to disclose the pair of electrodes including a first electrode extending along a first elongated surface of the waveguide structure and a second electrode

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extending along a second elongated surface of the waveguide structure, the first elongated surface being opposite and parallel to the second elongated surface, each of said first and second electrodes being divided into spaced apart first and second electrode portions, each of said spaced apart first and second electrode portions of said first electrode being electrically connectable to an RF power supply for applying an RF potential across said gain medium; and, a metal shield located between said spaced apart first and second portions of said first and second electrodes, the metal shield being positioned orthogonal to said first and second elongated surfaces so as to prevent RF coupling between said spaced apart first and second portions of said first and second electrodes. Opower teach the pair of electrodes including a first electrode **68** extending along a first elongated surface of the waveguide structure and a second electrode **70** extending along a second elongated surface of the waveguide structure, the first elongated surface being opposite and parallel to the second elongated surface, each of said first and second electrodes being divided into spaced apart first and second electrode portions, each of said spaced apart first and second electrode portions of said first electrode being electrically connectable to an RF power supply for applying an RF potential across said gain medium, **see col. 6, line 57-col. 7, line 21**. It would have been obvious to one of ordinary skill in that art at the time the invention was made to divide the electrodes of Hart et al., since Opower teaches that it would give rise to individual segments which enable a defined electric field to be generated in the discharge chamber, **see col. 7, lines 4-11**. Although neither Hart et al. nor Opower teach a metal shield, Opower discloses shielding located between said spaced apart

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first and second portions of said first and second electrodes, the metal shield being positioned orthogonal to said first and second elongated surfaces so as to prevent RF coupling between said spaced apart first and second portions of said first and second electrodes, **see col. 6, lines 60-67**. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ an equivalent means such as a metal shield to perform the same function of preventing RF coupling.

Regarding claim 41, Hart et al. teach the second electrode **32** is electrically connected to the metal housing **24**. It would be inherent that while employing the teachings of Opower of dividing the electrode that each of the segments of the second electrode be electrically connected to the metal housing **24**.

Regarding claim 42, it is inherent that all lasers have a resonator axis and laser radiation is caused to circulate in the resonator (when operable). As for all the other stated limitations, see rejection to claim 40 above.

Regarding claim 43, Hart et al. teach the metal housing **24** is grounded, **see Fig. 8**.

Regarding claim 44, Hart et al. and Opower teach all the stated limitations, see rejection to claim 42 above.

Regarding claims 45-47, it would have been an obvious matter of design choice to form/shape the metal shield in any manner, since applicant has not disclosed that shape of the shield solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with grooves.

Regarding claim 48, Hart et al. teach an RF power supply 30. As for all the other stated limitations, see rejection to claims 40 and 42 above.

Regarding claims 47-51, see rejections to the corresponding claims above.

Regarding claim 52, RF power supplies having a shared common oscillator and at least one preamplifier is well known in the electrical art.

Response to Arguments

4. Applicant's arguments with respect to claims 40-51 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chenausky (5748663) and Terai et al. (4956847) teach the use of a power supply.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

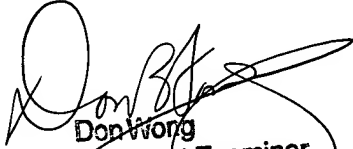
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is (571)272-1942. The examiner can normally be reached on 8:00 - 5:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (571)272-1941. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CHJ

chj


Don Wong
Supervisory Patent Examiner
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